



Docket: 131087-M200 (03179)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: David KUSUMA et al.

Serial No.: 10/735,724

Filed: December 16, 2003

For: COLLAPSIBLE CONTAINER

Examiner: Stephen J. CASTELLANO

**APPELLANTS' BRIEF ON APPEAL**

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The following Appeal Brief is submitted pursuant to the Notice of Appeal filed in the above-identified application on February 13, 2009.

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## **2. JURISDICTIONAL STATEMENT**

The Appellants seek review of the decision of the Primary Examiner in application Serial No. 10/735,724 in twice rejecting the claims. The Board of Patent Appeals and Interferences has jurisdiction to hear an appeal of a decision of the Primary Examiner pursuant to 35 U.S.C. § 134. The Appellants filed their timely Notice of Appeal on February 13, 2009.

**3. STATEMENT OF THE REAL PARTY IN INTEREST**

The real party in interest in this appeal is Dart Industries Inc., assignee.

**4. RELATED APPEALS AND INTREFERENCES**

Appellants know of no related patent applications or patents under any appeal or interference proceeding.

**5. STATUS OF CLAIMS**

Claims 1, 59, 60, 62, 70-82, and 84-91 are pending in this application and are subject to this appeal. Claims 1, 59, 60, 62, 70-82, and 84-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lovell (U.S. Patent No. 3,220,544) in view of Mikol (U.S. Patent No. 4,927,191). A copy of the claims appears in the attached Appendix.

Claims 2-58, 61, 63-69, and 83 have been canceled.

**6. STATUS OF AMENDMENTS**

There are no unentered amendments subsequent to  
the Final rejection of August 18, 2008.

## **7. SUMMARY OF CLAIMED SUBJECT MATTER**

The claims of the present invention are directed toward a collapsible container having a series of annular or peripherally continuous and alternately inclined wall sections 34 (Figs. 3, 5, 5A; page 8, lines 25-26), each having a lower major portion 35 of limited flexibility, a minor upper portion 40 being relatively thinner than the remainder of the wall section forming a flexure zone (Figs. 3, 5, 5A; page 10, lines 1-8). Therefore, the container utilizes a network of flexure zones and functions to open and close based on a principle of opposing angles, and not an accordion shape that stretches to open and close like a spring (Figs. 3, 4, 8-10; page 14, lines 12-16). Both the action of collapsing and expanding the container requires the folds to be individually manipulated (page 15, lines 9-11) by application of positive force. To move from the closed position to the open position or vice-versa, the flexure zone is twisted and distorted slightly until it overcomes the

opposing angle and then flips to the other position. As a consequence, there is no other intermediate position for the fold: it is either open or closed, or it is being twisted (page 15, lines 15-23). Because of the two natural states for the flexure zones, the container can remain flat when in a closed or collapsed position and remain expanded when in any open or partially open position (page 16, lines 3-6).

**8. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The sole issue in this appeal is whether claims 1, 59, 60, 62, 70-82, and 84-91 are obvious under 35 U.S.C. §103(a) over Lovell in view of Mikol.

## **9. ARGUMENT**

The container of the claimed invention is able to adopt a fully expanded condition, a partially expanded condition, and a fully collapsed condition, as a result of the specific structural features recited in claim 1, including the additional limitation that each flexure zone is independently activatable for movement between a first, open natural state, in which respective adjacent sections are unfolded, and a second, closed natural state in which the respective adjacent sections are folded. The ability of the claimed container to have this stable "partially expanded condition" is made possible by the flexure zones which can be independently manipulated to place the wall sections, and the container itself, in a variety of conditions. Moreover, the multiple wall sections of the claimed container do not all "reverse fold", but rather, every other section remains upright and does not change its direction when the container adjusts from

a collapsed to a more expanded condition. In addition, the claimed wall sections each have a thickness greater than the thickness of the flexure zones.

It is submitted that Lovell teaches away from the present invention. Lovell teaches a collapsible container which includes a series of folds or pleats 16.

As stated in Lovell:

The accordion pleats 16 also embody features which are not readily apparent. The material of the pleats is relatively thin, preferably less than .005 and advantageously between .0005 and .002 inch. This accounts in part for the extreme economy of the cup.  
It will also be noted that the edges of the pleats are sharply creased and are slightly thicker than the sides of the pleats. These edges form reinforcing rings r (see FIG. 3) in the cup which prevent its inward collapse when normally

gripped in use. (col. 2, lines 55-63) (emphasis added).

Thus, Lovell fails to teach or suggest pleats, the wall sections of which have a thickness greater than the thickness of the edges, as required by the present claims, but rather teaches the converse.

As quoted above, Lovell teaches that the thickened edges are necessary to prevent the container from collapsing inwardly. Accordingly, any attempt to modify the edges of the pleats in Lovell in order to reduce their thickness, or to combine Lovell with the living hinge structure of Mikol, would render the Lovell container unsatisfactory for its intended purpose, as such modification or combination would cause the container to inwardly collapse when normally gripped in use. However, pursuant to MPEP §2143.01, a proposed modification or combination of the prior art cannot render the prior art unsatisfactory for its intended purpose. Therefore, the proposed modification is contrary to MPEP §2143.01.

Moreover, the expandability and collapsibility of the container in Lovell is made possible by having the sides of the pleats or wall portions to reverse-fold between the open and closed positions, which Appellants believe is necessary to allow the container to expand and collapse. That is to say, the sides of the pleats fold downward when the container is collapsed and the container is expanded, the sides of the pleats unfold and reverse their position to be directed upward. Therefore, it appears that it is necessary to have the edges of the pleats sharply creased and thicker than the sides of the pleats to allow the container to expand and collapse, and any suggestion to either reduce the thickness of the edges of the pleats, or increase the thickness of the sides of the pleats, would render the container non-functional to expand and collapse.

However, as stated hereinabove, the multiple wall sections of the claimed container do not reverse-fold, but rather, every other section remains upright

and does not change its direction when the container adjusts from a collapsed to a more expanded container. That is, the adjacent wall sections have limited flexibility in relation to the respective flexure zones, and therefore, do not reverse-fold.

Moreover, the container of the claimed invention is able to adopt a "partially expanded position" by virtue of having flexure zones which can be independently manipulated by the application of positive force to the wall sections to place the wall sections, and the container itself, in a variety of conditions. Again, Appellants believe the reason the container of Lovell cannot be modified so it can adopt a partially expanded position is because it requires the sides of the pleats to be thinner than the edges to allow the sides of the pleats to reverse fold.

For all of the above reasons, it is submitted that the rejection of claims 1, 59, 60, 62, 70-82,

and 84-91 on appeal under 35 U.S.C. 103(a) is in error, and should be reversed.

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## **10. CLAIMS APPENDIX**

1. (Previously presented) A collapsible container comprising

a base, a top ring and a wall peripherally fixed to said base and top ring and extending therebetween, said container being adjustable between an expanded position with the top ring spaced upward from said base and forming a container interior, and a collapsed position with said top ring surrounding said base in outwardly spaced substantially concentric relation thereto, said wall comprising multiple upwardly extending peripherally continuous sections which, in the expanded position of said container, angle alternately outward and inward relative to the container interior, said sections, in the collapsed position of said container, being folded on each other and concentrically received generally between the base and the top ring with the sections encircling the base and in turn being encircled by said top ring, wherein the container

includes flexure zones joining adjacent sections, the adjacent sections being of limited flexibility relative to the flexure zones, wherein said sections each have a thickness greater than the thickness of the flexure zones, and wherein each flexure zone is independently activatable for movement between a first, open natural state in which adjacent sections are unfolded, and a second, closed natural state in which the respective adjacent sections are folded; and wherein the container is adjustable to a fixed, partially expanded position between said expanded position and said collapsed position.

Claims 2 to 58 (Canceled)

59. (Previously presented) A collapsible container comprising:

a base, a top ring, and a wall extending between the top ring and the base, wherein the wall has at least a first section, a second section, and a third

section, wherein the first section is adjacent the second section and wherein the second section is adjacent the third section, a first flexure zone disposed between the first section and second section, a second flexure zone disposed between the second section and the third section, and a third flexure zone disposed between the third section and the base, wherein the first and second sections each have a thickness greater than the thickness of the first flexure zone, and the second and third sections each have a thickness greater than the thickness of the second flexure zone, wherein the container is adjustable between at least an expanded position forming an interior and having a first volume, a partially expanded position having a second volume less than the first volume, and a collapsed position with said top ring surrounding said base in outwardly spaced substantially concentric relation thereto with the sections being folded and concentrically received generally between the base and the top ring with the

sections encircling the base and in turn being encircled by said top ring; wherein in the expanded position, the first section angles outward relative to the interior, and the second section angles inward relative to the interior; and wherein said container is stable in each of said positions and wherein positive force is required to adjust the container from the partially expanded position to the expanded position, and to adjust the container from the partially expanded position to the collapsed position.

60. (Previously presented) The container of claim 59 wherein in the expanded condition, the first and second sections form an obtuse angle.

Claim 61 (Canceled)

62. (Previously presented) The container of claim 59, wherein in the collapsed condition, the first and second sections form an acute angle.

Claims 63 to 69 (Canceled)

70. (Previously presented) The container of claim 59, wherein the first flexure zone is substantially arcuate.

71. (Previously presented) The container of claim 59, further comprising a fourth flexure zone disposed between the third section and the top ring.

72. (Previously presented) The container of claim 59, wherein in the expanded position, the third section angles outward relative to the interior.

73. (Previously presented) The container of claim 59, wherein the top ring includes an annular flange extending outwardly therefrom.

74. (Previously presented) The container of claim 59, wherein in the collapsed position, the first, second, and third sections are folded and concentrically disposed between the base and the top ring.

75. (Previously presented) The container of claim 59, wherein in the collapsed position, the first section and the second section form a first angled opening, wherein the base at least partially defines a support plane, and wherein the centerline of the first angled opening is substantially perpendicular to the support plane.

76. (Previously presented) The container of claim 59, wherein in the collapsed condition, the folded

portion of the wall and the base are each at an elevation, wherein the lowest elevation of the base is lower than the lowest elevation of the folded portion of the wall.

77. (Previously presented) The container of claim 59, wherein a portion of the wall overlays a portion of the base.

78. (Previously presented) The container of claim 59, wherein the wall is molded in the collapsed position.

79. (Previously presented) The container of claim 59, wherein the base is non-permeable.

80. (Previously presented) The container of claim 59, wherein the first, second, and third flexure zones each have a thickness, and wherein the

thickness of the first, second, and third flexure zones is substantially equal.

81. (Previously presented) The container of claim 1, wherein in the expanded position, said sections form an obtuse angle.

82. (Previously presented) The container of claim 1, wherein in the collapsed position, said sections form an acute angle.

83. (Canceled)

84. (Previously presented) The container of claim 1, wherein one of said flexure zones is disposed between the top ring and one of said sections.

85. (Previously presented) The container of claim 1, wherein one of said flexure zones is disposed between the base and one of said sections.

86. (Previously presented) The container of claim 1, wherein the top ring includes an annular flange extending outwardly therefrom.

87. (Previously presented) The container of claim 1, wherein in the collapsed position, the folded sections are concentrically disposed between the base and the top ring.

88. (Previously presented) The container of claim 1, wherein in the collapsed position, the folded sections are at an elevation wherein the lowest elevation of the base is lower than the lowest elevation of the folded section.

89. (Previously presented) The container of claim 1, wherein a portion of the wall overlays a portion of the base.

90. (Previously presented) The container of claim 1, wherein the wall is molded in the collapsed position.

91. (Previously presented) The container of claim 1, wherein the base is non-permeable.

## **11. CLAIM SUPPORT AND DRAWING ANALYSIS**

Reference numerals for figures are given in parentheses.

<b>Independent Claim 1</b>	<b>Specification Support</b>
1. A collapsible container comprising	Figs. 1-4 (10); page 2, lines 15-21
a base, a top ring and a wall peripherally fixed to said base and top ring and extending therebetween,	Figs. 1, 2, 3: (12), (14), (16); page 7, lines 10-12
said container being adjustable between an expanded position with the top ring spaced upward from said base and forming a container interior,	Figs. 1, 3; page 4, lines 8-11

<p>said wall comprising multiple upwardly extending peripherally continuous sections which, in the expanded position of said container, angle alternately outward and inward relative to the container interior,</p>	<p>Figs. 3, 5, 5A (34); page 3, lines 22-26; page 4, lines 2-4</p>
<p>said sections, in the collapsed position of said container, being folded on each other and concentrically received generally between the base and the top ring with the sections encircling the base and in turn being encircled by said top ring,</p>	<p>Figs. 2, 4, 6, 6A; page 4, lines 11-14</p>

wherein the container includes flexure zones joining adjacent sections,	Figs. 3-6 (40); page 4, lines 17-21; page 10, lines 9-12
wherein said sections each have a thickness greater than the thickness of the flexure zones,	Fig. 5A (34), (38), (40); page 5, lines 11-15
and wherein each flexure zone is independently activatable for movement between a first, open natural state in which adjacent sections are unfolded,	Figs. 5, 5A; page 10, lines 14-16
and a second, closed natural state in which the respective adjacent sections are folded; and	Figs. 6, 6A; page 11, lines 8-11

wherein the container is adjustable to a fixed, partially expanded position between said expanded position and said collapsed position.	Figs. 7-9; page 11, line 21 to page 12, line 2
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<b>Independent Claim 59</b>	<b>Specification Support</b>
59. A collapsible container comprising:	Figs. 1-4 (10); page 2, lines 15-21
a base, a top ring, and a wall extending between the top ring and the base,	Figs. 1, 2, 3 (12), (14), (16); page 7, lines 10-12

wherein the wall has at least a first section, a second section, and a third section, wherein the first section is adjacent the second section and wherein the second section is adjacent the third section,

Figs. 3, 5, 5A; page 8, line 25 to page 9, line 4

a first flexure zone disposed between the first section and second section, a second flexure zone disposed between the second section and the third section, and a third flexure zone disposed between the third section and the base,

Figs. 3, 5 (40);  
page 4, lines 17-21;  
page 15, lines 3-5;  
page 10, lines 9-12

<p>wherein the first and second sections each have a thickness greater than the thickness of the first flexure zone, and the second and third sections each have a thickness greater than the thickness of the second flexure zone,</p>	<p>Fig. 5A (38, 40); page 4, lines 17-21</p>
<p>wherein the container is adjustable between at least an expanded position forming an interior and having a first volume, a partially expanded position having a second volume less than the first volume, and</p>	<p>Figs, 1, 3, 7-9; page 4, lines 8-11; page 16, lines 3-12</p>

a collapsed position with  
said top ring surrounding  
said base in outwardly spaced  
substantially concentric  
relation thereto with the  
sections being folded and  
concentrically received  
generally between the base  
and the top ring with the  
sections encircling the base  
and in turn being encircled  
by said top ring;

Figs. 4 (12, 14,  
34), 10 (12, 14);  
page 4, lines 11-14

wherein in the expanded  
position, the first section  
angles outward relative to  
the interior, and the second  
section angles inward  
relative to the interior;

Figs. 3, 5 (34, 35);  
page 4, lines 2-4

and wherein said container is stable in each of said positions	page 12, lines 1-2
and wherein positive force is required to adjust the container from the partially expanded position to the expanded position, and to adjust the container from the partially expanded position to the collapsed position.	page 15, lines 11-12

**12. EVIDENCE APPENDIX**

None.

**13. RELATED PROCEEDINGS APPENDIX**

None.